

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director



January 31, 1995

Permit #
85-03
58-03

Mr. Jim Brown
Madison County Landfill
23 Long Branch Road
Marshall, NC 28753

Fac/Perm/Co ID #	Date	Doc ID#
<i>58-85-03</i> <i>my</i>	<i>7/19/95</i>	<i>DIN 14415</i>

Dear Mr. Brown:

The Division of Solid Waste Management, Solid Waste Section, has reviewed your request for approval of a Municipal Solid Waste (MSW) Pilot Composting Project for Madison County. Approval of this activity is in accordance with the N.C. Solid Waste Management Rules, 15A NCAC 13B .1409 and subject to the following conditions:

- (1) The approval period is from March 1, 1995 to March 1, 1996. If an extension is needed it must be requested by February 1, 1996, with a justification for the extension.
- (2) Composting at this site shall be limited to the materials specified in the application.
- (3) The composting shall take place at the Madison County landfill at a site identified as site # 2 in an August 1, 1994, letter from Ted Lyon. The site shall be prepared to control run-off and run-on. Best management practices shall be utilized for this purpose.
- (4) Within 30 days of completion of the pilot project, or by April 1, 1996, which ever occurs first, two copies of the final report shall be submitted to the Solid Waste Section. The report shall include:
 - a) Volume of each type of waste composted and the mix(es) used;
 - b) Temperature monitoring, pile turning and temperature/time relationship records;
 - c) Testing results of final product; and
 - d) Distribution of final products.



**North Carolina
Cooperative Extension Service**

NORTH CAROLINA STATE UNIVERSITY
COLLEGE OF AGRICULTURE & LIFE SCIENCES

Madison County Extension Center • P.O. Box 609, Marshall, NC 28753 • (704) 649-2411

December 6, 1994

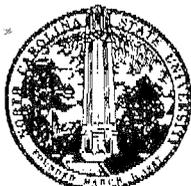
Ted Lyon
NCDEHNR Solid Waste Section
Box 27687
Raleigh, NC 27611

Dear Ted,

This letter is to request a permit for a Pilot Composting Project for the Madison County Solid Waste Department, cooperating with the City of Mars Hill, North Carolina and The North Carolina Cooperative Extension Service. As indicated in the Grant Proposal, our objective is to demonstrate the use of composting as an effective means of reducing landfill waste, and the beneficial uses of compost as a soil amendment by homeowners and commercial farmers in Madison County.

The nitrogen component of the compost will consist of food waste from retail food outlets in the Mars Hill area initially, with hopes of expansion by the end of the project. In addition to wet food waste other potential N. producing components available seasonally include tobacco stalks from local farmers, and wet sludge from municipal waste water treatment plants within Madison County. A local dairy farm is desirous utilizing this project to provide an alternative means of disposing of animal waste when weather and soil conditions prohibit land application. Unmarketable produce from county farms producing commercial produce such as tomatoes may also be available seasonally. Mixed quality paper collected by volunteer cooperators in Madison County should provide ample high carbon material to utilize a high percentage of the wet waste available. Chipped wood, and tree limbs will likely need to be added to provide bulk, and improve air movement through the piles for optimum composting time.

The site of the project will be on the current Madison County Landfill property. A map detailing the exact location of the proposed compost site is enclosed for further reference. All materials composted will be weighed into and out of the compost project to determine the amount of landfill space conserved and volume reduction obtained by composting. In the event that wet sludge is used chemical analysis of the sludge will be provided by the supplier of the sludge consistent with existing sludge permit requirements. Should animal waste be included, analysis will be conducted by the North Carolina Department of Agriculture, Agronomic Division. Upon completion of the composting process analysis of the finished product will be conducted by the Department of Biological and Agricultural Engineering, N.C.S.U. to monitor soil fertility characteristics, and metals content.



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December 14, 1994

Beth Graves,
Office of Waste Reduction, DEHNR
3825 Barrett Drive, Suite 300
Raleigh, N.C. 27609

Dear Beth,

The letter originally sent to you requesting a permit for Madison County's Pilot Composting Project was redirected to Ted Lyon by Fax and U.S. Mail Friday December 9. Assuming a permit is granted per that letter our proposed plans are as follows:

1. Permit application	December 9, 1994
2. Complete Site Preparation	February 1, 1995
3. Equipment Purchase	February 1, 1995
4. County wide Publicity&Education	February 1, 1995
5. Initiate Collection of Compostable Waste	March 15, 1995
6. Start Composting	March 15, 1995

Equipment to be purchased or acquired upon notification of the permit approval includes: Thermometers sufficient to monitor compost pile temperatures.

Wood Chipper

Materials for construction of a screening device.

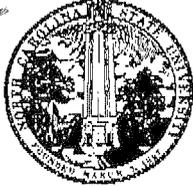
Two other items needed are in hand at present including a Bobcat Loader for turning the piles, and an industrial paper shredder.

Please note that the schedule of events above could be significantly affected by weather here in January. Jim Brown, Solid Waste Director, and I believe that contingent to normal weather these objectives can be met. We expect the mixture of wet food waste and mixed paper to complete the composting process in about 90 days, so by mid to late June 1995 we should have finished product to analyze and introduce to potential users.

If you have additional questions about this project please contact Jim Brown, or myself.

Sincerely Yours,

Maurice McAlister,
County Extension Director



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Madison County Extension Center • P.O. Box 609, Marshall, NC 28753 • (704) 649-2411

January 24, 1995

TO: Ted Lyons

FROM: Maurice McAlister

RE: Addendum to Madison County Permit Application

1. Owner County of Madison N.C. and City of Mars Hill N.C. Operator, Jim Brown, Director of Solid Waste Department, Madison County, Brigman Farm Road, Marshall N.C. 28753 in cooperation with Maurice McAlister, County Extension Director, P.O. Box 609, Marshall N.C. Composting will be conducted on a prepared site on the property now being used by the County of Madison for Waste Disposal.
2. Primary Compost Components include mixed grade paper predominantly low quality slick paper separated from the waste stream by high volume users. (U.S. Post Offices in Mars Hill and Marshall, County Government Offices, Madison County Schools, and Mars Hill College. Wet Food Waste from retail food outlets in the Mars Hill area, Mars Hill College Food Service, and Madison County Schools. Other potential N. sources can include agricultural waste ie culled tomatoes (seasonally), tobacco stalks (seasonally). Bulking Materials. Chips of yard waste, including tree limbs, other chipped wood will be added for bulk. In the event these materials are not available in sufficient quantities wood bark from a local saw mill may need to be added to provide proper bulking of this material.
3. Time Frame. Project is projected to begin composting in March 1995, and complete the project by March 1996.
4. The limiting factor is wet food waste. Based on a C:N ratio of 30:1 mixed paper to wet food waste it is anticipated that the project will be limited to a maximum of 20 cubic yards per month, and a maximum of 60 cubic yards for the project.
5. Mixed paper constitutes over 25% of the total waste stream in this county. Although the wet waste included in this project is clearly not as significant in terms of total percentage, it can be separated comparatively easily and is an obvious component to any composting effort. The primary effort however is to develop an alternative to landfilling paper.
6. Data will be collected to determine the following:
ROM- Reduction In Organic Matter (based on windrow size reduction)
Fecal Coliform, initially, then discontinued when it is documented that fecal coliform is not a problem.
Other tests and procedures limited to those available from N.C.D.A. Waste Analysis Report.